process the type of data received. The service DSP engine processes the received

data using that firmware algorithm.

IN THE CLAIMS:

Please amend claims 54, 55, 56, 58, 59 and 60 as follows:

The following are unmarked claims as amended. Marked up claims are provided in

an Appendix to this Amendment.

54.   (Amended)   A computer readable medium containing executable

instructions which, when executed in a processing system, causes the system to

perform digital signal processing (DSP) of a plurality of data types comprising:

continuously broadcasting a plurality of firmware algorithms to a

plurality of DSP engines over a channelized serial bus; and

selectively monitoring for and receiving at least one firmware algorithm

of the plurality of firmware algorithms by at least one of the plurality of DSP

engines, wherein the at least one firmware algorithm is used to process data of at

least one corresponding data type received by the at least one of the plurality of

DSP engines over at least one data line.

55.   (Amended)   The computer readable medium of claim 54, further causing

the system to perform:

receiving at least one pulse coded modulation (PCM) data stream from a

public switched telephone network (PSTN);

generating at least one packet of data from the PCM data stream using the

received at least one firmware algorithm; and

transmitting the at least one packet of data over an Internet Protocol (IP) network.

56. (Amended) The computer readable medium of claim 54, further comprising:

receiving at least one packet of data from an IP network;

generating at least one PCM data stream from the at least one packet of data using the at least one firmware algorithm; and

transmitting the at least one PCM data stream over a PSTN.

58. (Amended) The computer readable medium of claim 57, wherein selectively monitoring for and receiving at least one firmware algorithm comprises:

determining a data type of the data received into at least one of the plurality of service DSP engines;

determining at least one firmware algorithm required to process the received data;

determining an address of at least one channel of the serial bus on which the required at least one firmware algorithm is available.

59. (Amended) The computer readable medium of claim 58, wherein selectively monitoring for and receiving at least one firmware algorithm further comprises unmasking a bit of an interrupt mask in the at least one of the plurality of service DSP engines, the unmasked bit corresponding to the address of at least one channel of the serial bus on which the required at least one firmware algorithm is transmitted.

60. (Amended)   The computer readable medium of claim 59, wherein selectively monitoring for and receiving at least one firmware algorithm further comprises:

executing at least one interrupt service routine in response to receiving an interrupt signal corresponding to the unmasked interrupt bit;

receiving the at least one firmware algorithm in response to execution of the interrupt service routine; and

storing the received at least one firmware algorithm in a memory of the service DSP.